INFORMATION REPORT

CONFIDENTIAL

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1. From observations of activities at the I.G. Farben plant at Bitterfeld, Saxony-Anhalt, it would appear that the Russians are more interested in obtaining a complete picture of all research work carried on under Nazi auspices than in starting any research work of their own on the spot. The former I.G. Farben scientists at Bitterfeld are presently engaged in work on the more promising aspects of projects which were begun during the war and had not been completed at the time of the capitulation. [redacted] failed to detect a single item of current research with obvious military connotations -- with the possible exception of certain work relating to the vapor tension of calcium and calcium alloys and certain other constants connected with the purification of calcium by volatilization. A few items of similar nature (development of heat-resisting plastics for use in rockets, studies on the decomposition of peroxides by means of permanganate) were started at Bitterfeld before the capitulation and were merely given finishing touches under Russian supervision.

2. In addition to the Russian management of I.G. Bitterfeld, which is mainly concerned with research of a commercial or limited functional nature, there are two independent Russian agencies installed in the plant. They are directly controlled by their respective ministries in Moscow and are staffed largely with Russians (plus some German collaborators). They have the whole of the former I.G. Bitterfeld metallurgical laboratory at their disposal (dismantled in 1946-1947). These agencies take orders only from Moscow, whence they receive their own supplies of funds, rations, and equipment. They do, however, approach German I.G. Bitterfeld chemists and engineers who are nominally under the control of the other Russian management, and engage them to write papers on subjects in their particular fields. This practice is frowned upon by the regular Russian plant managers, since these extra projects divert energies of these men from their regular tasks. The two Moscow-controlled agencies at Bitterfeld are the Research Laboratory for Quantitative Measuring Devices, under the Soviet Ministry for Chemical Industries, and the Planning Office ("Planungtechnisches Büro"), under the Soviet Ministry for Non-ferrous Metals. The latter agency was only recently set up and is engaged in drawing up plans for the establishment of a new institute for metallurgical research in Moscow.

2. The following is an incomplete listing of subjects on which the German specialists at Bitterfeld are writing papers. These are principally topics which were explored at the I.G. Farben plant during the Nazi administration and on which the Russian management wishes further information.

Caustic alkalis and related subjects

Results of testing an electrolytic cell of the Hooker type.

Concentration of caustic alkali lyes through heating in graphite troughs.

Survey of all types of cells for alkali electrolysis, including weighed comparison of results obtained.

Production of hydrochloric acid from components in a bipolar cell.

Sodium sulphate electrolysis (based on various types of cells tested at Bitterfeld before the capitulation).

Production of sodium orthosilicate from caustic soda and quarts.

Organic compounds

Production of chlorinated hydrocarbons: tri-chloro-ethane, di-chloro-ethylene, tri-chloro-ethylene, per-chloro-ethylene, hexa-chloro-ethylene, carbon tetrachloride--papers on each of these subjects.

Production of benzoic acid.

Plastics

Polymerization of vinyl chloride (solvents, accelerators, retarders, etc.). Plastics on a polyvinyl chloride basis having a high softening point.

25X1 Use of a special brand of soft Igelite (polyvinyl chloride with a special softener--[redacted] Comment: Probably "Palatinol" from I.G. Ludwigshafen) as containers for hydrogen peroxide solutions of high concentration. [redacted]

25X1 [redacted] the production of soft Igelite has recently been started at Bitterfeld. The substance is delivered to a firm in Halle which makes large

25X1 bags for the above-stated purpose.

Various methods for making "sponge Igelite".

Insecticides and germicides

Production of insecticides of the "Gesarol" type (condensation products of chloral, chlorobenzene, and homologues).

Insecticidal properties of hexa-chloro-cyclohexanone and isopropyl chloride.

Production of the hexa-methyl ester of orthophosphoric acid (an I.G. Farben product known as "Bladan").

Insecticidal properties of mixtures of sublimate of mercury and wetting agents of the "Nekal" type.

Miscellaneous chemical subjects

Cobalt and aluminum catalysts for obtaining NO_2 from ammonia.

Production of calcium chloride lye of fifty percent concentration.

Production of asbestos having long fibres from Russian short-fibred asbestos by treatment with HF (sic).

Pigments of high coloring power on iron oxide and chromium oxide bases.

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Decomposition of peroxides with permanganates.

Survey of work done by I.G. Farben on artificial pyrolusite for dry cell batteries..

Wet cell batteries with magnesium and carbon as electrodes and a chlorate electrolyte.

Metals

Nickel and other heavy metal salts for use in electro-plating (production now started on an industrial scale).

Electrodes of high quality steel alloys (cobalt, boron, titanium, and hard carbides generally) for use in welding hard coatings on low-grade steel bases. Special applications: moulds for making lignite briquettes for fuel, shovels for excavators, etc.

High quality steel castings.

Extraction of aluminum metal of a high degree of purity from scrap aluminum alloys by treatment with mercury (this is a continuation of research done by I.G. Farben for the recovery of pure aluminum from scrap).

Recovery of pure aluminum from technically pure aluminum by the three-layer process (Alais Forges et Camargue and AIAG-Neuhausen).

Recovery of aluminum and magnesium from scrap by the Beck process. (This process was and is being used at Bitterfeld as the only effective process for recovering virgin metals from scrap on an industrial scale.)

Production of calcium zinc alloys by direct electrolysis and the separation of components by fractional distillation.

Apparatus

Use of high-density graphite (an I.G. Farben product called "Igurite") in chemical apparatus.

High-efficiency distillation columns--for use in connection with the distillation of chlorinated hydrocarbons and similar organic substances.

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